

1996

ARTICLES IN REFEREED PROFESSIONAL JOURNALS (20)

Bowman, R.A., R.L. Anderson, D.C. Nielsen, M.F. Vigil, and **A.D. Halvorson**. 1996. Soil Organic matter dynamics in the Central Plains. *National Conservation Tillage Digest* 3(2):33,35.

Delgado, J.A., A.R. Mosier, R.H. Follett, D. Westfall, L. Klemetsson, and J. Vermeulen. 1996. Effect of N management on N₂O and CH₄ fluxes and N recovery in an irrigated mountain meadow. *Nutrient Cycling in Agroecosystems*. 46:127-134.

Delgado, J.A. and M.C. Amacher. 1996. Modeling the uptake of sulfur by crops on three alluvial soils of Louisiana: Wheat. *Comm. Soil Sci Plant Anal*. 28:225-236.

Delgado, J.A. and **A.R. Mosier**. 1996. Mitigation alternatives to decrease nitrous oxide emissions and urea-nitrogen loss and their effect on methane flux. *J. Environ. Qual*. 25:1105-1111.

Delgado, J.A., R.F. Follett, J.L. Sharkoff, and M.K. Brodahl. 1996. Nitrogen content and indices of selected crops grown in the San Luis Valley of south central Colorado and their use in simulating crop N uptake and soil N transformations. *NLEAP FACTS Sheet 4/96*. USDA-ARS and USDA-NRCS.

Delgado, J.A., M.K. Brodahl, M.J. Shaffer, **R.F. Follett**, and J.L. Sharkoff. 1996. A list of definitions to consider when using the NLEAP model to evaluate N management practices in soils containing coarse fragments. *Nitrogen Management NLEAP FACTS Sheet 5/96*. USDA-ARS and USDA-NRCS.

Delgado, J.A., A.R. Mosier, D.W. Valentine, D.S. Schimel, and W.J. Parton. 1996. Long term 15N studies in a catena of the shortgrass steppe. *Biogeochemistry* 32:41-52.

Dhuyvetter, K.C., C.R. Thompson, C.A. Norwood, and **A.D. Halvorson**. 1996. Economics of Dryland Cropping Systems in The Great Plains: A Review. *J. Prod. Agric*. 9(2):151,216-222.

Follett, R.F., J. Arnold, M.K. Brodahl, J. Cipra, P. Doraiswamy, T. Elliott, D.A. Farrell, I. Flitcroft, K. Killian, K. Paustian, R. Srinivasan, and S. Waltman. 1996. Determination of Agroecozones in the continental United States. Evaluation Study Report (funded on 23 January, 1996 and completed report submitted on April 24, 1996 to Dr. Karl N. Stauber, USDA Under Secretary for Research, Education, and Economics). 168 p.

Frank, A., J. Krupinsky, and **A.D. Halvorson**. 1996. Early Summer Heat Zapped Potential from '95 Wheat Crop. *Farm and Ranch Guide*. Friday, Jan. 19, 1996 issue 16(19):45.

Franzen, D.W., V.L. Hofman, **A.D. Halvorson**, and L.J. Cihacek. 1996. Sampling for site-specific farming: topography and nutrient considerations. *Better Crops With Plant Food*. 80(3):14-17.

Freney, J.R., M.B. Peoples, and **A.R. Mosier**. 1996. Efficient use of fertilizer nitrogen by crops. Food & Fertilizer Technology Center Extension Bulletin 414, Taipei City, Republic of China on Taiwan, 13 p.

Keerthisinghe, D.G., X.J. Lin, Q.X. Lou, and **A.R. Mosier**. 1996. Effect of encapsulated calcium carbide and urea application methods on denitrification and N loss from flooded rice. *Fert. Res.* 45:31-36.

Merrill, S.D. and **A.D. Halvorson**. 1996. USDA-ARS develops new model for predicting wind erosion. *Farm and Ranch Guide*. 16(18):1, 19, 20.

Mosier, A.R., W.J. Parton, D.W. Valentine, D.S. Ojima, D.S. Schimel, and **J.A. Delgado**. 1996. CH₄ and N₂O fluxes in the Colorado shortgrass steppe: I. Impact of landscape and nitrogen addition. *Global Biogeochem. Cycl.* 10:387-399.

Mosier, A.R., J.M. Duxbury, J.R. Freney, O. Heinemeyer, and K. Minami. 1996. Nitrous oxide emissions from agricultural fields: Assessment, measurement and mitigation. *Plant and Soil*. 181:95-108.

Parton, W.J., **A.R. Mosier**, D.S. Ojima, D.W. Valentine, D.S. Schimel, K. Weier, and A.E. Kulmala. 1996. Generalized model for N₂ and N₂O production from nitrification and denitrification. *Global Biogeochem. Cycl.* 10:401-412.

Porter, L.K., **R.F. Follett**, and **A.D. Halvorson**. 1996. Fertilizer nitrogen recovery in a no-till wheat-sorghum-fallow-wheat sequence. *Agron. J.* 88:750-757.

Porter, L.K., **R.F. Follett**, and **A.D. Halvorson**. 1996. Plant N-¹⁵ uptake in a wheat-sorghum-fallow-wheat sequence under no-till in the semi-arid Great Plains. *Agron. J.* 88:750-757.

Sommerfeld, R.A, W.J. Massman, R.C. Musselman, and **A.R. Mosier**. 1996. Diffusional flux of CO₂ through snow: Spatial and temporal variability among alpine-subalpine sites. *Global Biogeochem. Cycl.* 10:473-482.

BOOKS AND BOOK CHAPTERS (4)

Cole, C.V., C. Cerri, K. Minami, **A.R. Mosier**, Rosenberg, D. Sauerbeck, et al. 1996. Agricultural options for mitigation of greenhouse gas emissions. pp. 745-771. *In* Climate Change 1995. Impacts, Adaptations, and Mitigation of Climate Change, R.T. Watson et al. (Eds.). Cambridge University Press, Cambridge.

Doran, J.W., A. Kessavalou, **G.L. Hutchinson**, M.F. Vigil, and **A.D. Halvorson**. 1996. Influence of cropping/tillage management on soil fertility and quality of former CRP land in the central High Plains. p. 205-209. *In* J.L. Havlin (Ed.). Great Plains Soil Fertility Conf. Proc., Vol. 6. Potash & Phosphate Institute, Manhattan, KS.

Follett, R.F. 1996. ARS biogeochemical dynamics research, an overview. pp. 13-25. *In* D.G. DeCoursey and V. Ferreira (Eds.). Global Change and Agriculture: Soil, Water, and Plant Resources Volume III. USDA/ARS Global Change Research Program.

Mosier, A.R., V.L. Cochran, J.A. Delgado, D.W. Valentine, and W.J. Parton. 1996. Methane and nitrous oxide fluxes in soils and current studies in subarctic, temperate and tropical grasslands. pp. 43-64. *In* D.G. DeCoursey and V. Ferreira (Eds.). Global Change and Agriculture: Soil, Water, and Plant Resources Volume III. USDA/ARS Global Change Research Program.

RESEARCH BULLETINS, PROCEEDINGS AND OTHER RESEARCH REPORTS (11)

Anderson, R.L. and **A.D. Halvorson.** 1996. Sod control when rotating back to cropland, guided by plant biology. p.167-177. Proc. 18th Annual Manitoba-North Dakota Zero Tillage Farmer's Association Workshop. Minot, North Dakota, Jan. 29-31, 1996.

Bowman, R.A., R.L. Anderson, D.C. Nielsen, M.F. Vigil, and **A.D. Halvorson.** 1996. Effects of cropping intensity on soil organic matter and aggregate stability. Proc. 1996 Great Plains Soil Fertility Conference. Kansas State University, Manhattan, KS. 6:174-182.

Delgado, J.A., R.F. Follett, J.L. Sharkoff, R.R. Riggensbach, and R.T. Sparks. 1996. Preliminary assessment of N-uptake and NO_3^- -N accumulation of winter cover crops and their effect on soil and water quality in the San Luis Valley of Colorado. 13th Annual Potato/Grain conference. (Monte Vista, Colorado, February 13 - 15) Conf. Proc. pp 5.

Delgado, J.A., R.T. Sparks, R.F. Follett, J.L.Sharkoff, and R.R. Riggensbach. 1996. Use of winter cover crops to conserve soil and water quality in the San Luis Valley of South Central Colorado. Soil Quality and Erosion Interaction Symposium (Keystone Colorado, July 7-10) SWCS Conf. Proc. (Accepted September 19, 1996).

Franzen, D.W., **A.D. Halvorson,** V.L. Hofman, and L.C. Cihacek. 1996. Initial comments on site-specific management in North Dakota. Proc. 1996 Great Plains Soil Fertility Conference. Kansas State University, Manhattan, KS. 6:115-125.

Franzen, D.W., V.L. Hofman, and **A.D. Halvorson.** 1996. Soil fertility and site-specific farming study at Area IV Research Farm. p.147-153. Proc. ND Water Quality Symposia. March 20-21, 1996, Bismarck, ND. NDSU Coop. Ext. Serv., Fargo, ND.

Halvorson, A.D. and A.L. Black. 1996. Dryland cropping systems and economics. p.157-165. Proc. 18th Annual Manitoba-North Dakota Zero Tillage Farmer's Association Workshop. Minot, North Dakota, Jan. 29-31, 1996.

Halvorson, A.D., A.L. Black, J.M. Krupinsky, S.D. Merrill, and D.L. Tanaka. 1996. Long-term tillage and N effects on crop production in dryland cropping systems. Proc. 1996 Great Plains Soil Fertility Conference. Kansas State University, Manhattan, KS. 6:199-204.



Mosier, A.R., W.J. Parton, D.W. Valentine, and D.S. Schimel. 1996. Long-term impact of N-fertilization on N_2O flux and CH_4 uptake in the Colorado shortgrass prairie. Proc. of the 9th N Workshop, Braunschweig Germany. 9:511-514.

Schlegel, A.J. and **A.D. Halvorson**. 1996. Return of CRP Land to crop production. In Proc. 1996 Great Plains Soil Fertility Conference. Kansas State University, Manhattan, KS. 6:237-245.

Sharkoff, J.L., **J.A. Delgado**, **R.F. Follett**, J.L., and R.R. Riggensbach. 1996. Nitrate leaching assessment of San Luis Valley Water Quality Demonstration Project Sites. 13th Annual Potato/Grain conference. (Monte Vista, Colorado, February 13 - 15) Conference Proceedings pp 9.